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EXAMINER: LAZO, THOMAS E.

CONFIRMATION NO: 3122

ART UNIT:

cojc

Attorney Docket No. AVID.18-2/C

THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT:

LUMPKIN

SERIAL NO.:

10/647,543

FILED:

AUGUST 25, 2003

PATENT NO.:

6,957,534

ISSUED:

OCTOBER 25, 2005

TITLE:

REACH ADJUSTMENT MECHANISM

FOR A MASTER CYLINDER LEVER OF A HYDRAULIC DISC BRAKE

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Attn: Certificate of Correction Branch

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Certificate
NOV 2 9 2005
Of Correction

Sir:

REQUEST FOR EXPEDITED CERTIFICATE OF CORRECTION OF PATENT FOR PTO MISTAKE (37 CFR 1.322(a))

- 1. Attached is Form PTO/SB/44, which is suitable for printing.
- 2. The exact location where the error occurred is in claim 21, which was truncated with the last two clauses of the claim not being printed. The last two clauses of claim 21read as follows:

reach adjustment means operatively associated with the lever for varying the rest position of the lever with respect to the housing independently of movement of the select distance between the port opening and the leading seal edge; and

dead band adjustment means operatively associated with the piston for moving the leading seal edge to adjust the select distance between the port opening and the leading seal edge without varying the rest position of the lever.

3. Claim 21 was initially submitted in the Amendment and Remarks filed on March 16, 2005 and was finally presented in the Amendment and Remarks filed on April 28, 2005, and received by the Patent Office on May 3, 2005. In the Notice of Allowability mailed with the Notice of Allowance on August 12, 2005, Examiner Lazo indicates the Notice of Allowability was responsive to the Amendment filed May 3, 2005 and that the allowed claims were claims 1-

37 CFR 1.8 CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:

Atm: Certificate of Correction Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on User 15, 2005

Signature: 1

Elizabath A. Šalačinski

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- 21. Copies of each of the referenced documents are attached hereto.
- 4. The above-referenced error was incurred through the fault of the Office and therefore no fee is believed due. Expedited issuance of the attached Certificate of Correction is respectfully requested.

Please send the Certificate to:

.... Ý

Swanson & Bratschun, L.L.C. 1745 Shea Center Drive, Suite 330 Highlands Ranch, Colorado 80129

Respectfully submitted,

James L. Brown, #48,576

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S:\CLIENTFOLDERS\AVID\18\18-2\C\REQUEST TO CORRECT PATENT 2.DOC

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO.

: 6,957,534

DATED

: October 25, 2005

INVENTOR(S) : Wayne R. Lumpkin

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

The last two clauses of Claim 21 were truncated in the printing of the patent. Claim 21 in its entirety appears below:

- A master cylinder for a bicycle hydraulic disc brake, the master cylinder comprising:
- a housing defining a cylinder, the cylinder having a first and second end;
- a hydraulic fluid reservoir;

a port between the hydraulic fluid reservoir and the cylinder providing fluid communication between the hydraulic fluid reservoir and the cylinder, the port having a port opening located between the first and second ends of the cylinder;

a piston received in the cylinder having a seal operatively associated therewith, the seal having a leading edge, the leading seal edge being moveable between a select starting position with the leading seal edge between the first end and the port opening with the leading seal edge a select distance from the port opening and a pressurized position with the leading seal edge between the port opening and the second end, the leading seal edge preventing fluid flow between the cylinder and the reservoir when positioned between the port opening and the second end to pressurize the second end;

a one piece lever pivotably attached to the housing, the lever being associated with the piston to move the piston between the select starting position and the pressurized position as the lever is pivoted between the rest position and a fully actuated position;

reach adjustment means operatively associated with the lever for varying the rest position of the lever with respect to the housing independently of movement of the select distance between the port opening and the leading seal edge; and

dead band adjustment means operatively associated with the piston for moving the leading seal edge to adjust the select distance between the port opening and the leading seal edge without varying the rest position of the lever.

MAILING ADDRESS OF SENDER: Customer No. 25871

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PATENT NO.

6.957.534

No. of additional copies

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Attorney Docket No. AVID.18-2/C

ES PATENT AND TRADEMARK OFFICE

APPLICANT:

LUMPKIN

SERIAL NO.:

10/647,543

FILED:

AUGUST 25, 2003

TITLE:

REACH ADJUSTMENT MECHANISM FOR A MASTER CYLINDER LEVER

OF A HYDRAULIC DISC BRAKE

EXAMINER: LAZO, THOMAS E.

ART UNIT: 3683

CONFIRMATION NO: 3122

Mail Stop Amendment Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

AMENDMENT AND REMARKS

Sir:

Amendments to the claims begin on page 2.

Remarks begin on page 9.

37 CFR 1.8 **CERTIFICATE OF MAILING**

class mail in an envelope addressed to: I hereby certify that this correspondence is being deposited with the United States Postal S Mail Stop Amendment, Assistant Commissioner for Patents,

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IN THE CLAIMS

Please replace the claims as filed with the claims set forth below.

(Original) A master cylinder for a hydraulic disc brake comprising:

 a housing defining a cylinder, the cylinder having a first and second end along its axis;
 a piston received in the cylinder, the piston having a radial seal between the piston and cylinder;

a lever pivotably associated with the housing for pivoting between a rest position and an actuated position relative to the housing;

a push rod operatively associated with the piston and the lever to move the piston axially within the cylinder as the lever is actuated between the rest and actuated position;

a threaded engagement between a first end of the push rod and the lever, the threaded engagement being configured to cause movement of the rest position of the lever relative to the housing when a rotating force is applied to the push rod causing axial rotation of the push rod;

a first set of protrusions operatively associated with the push rod to rotate axially with the push rod;

a second set of protrusions nesting with the first set of protrusions, the second set of protrusions being fixed against rotation relative to the push rod when the rotating force is applied to the push rod; and

biasing means operatively associated with at least one of the first and second sets of protrusions to bias the protrusions into nesting engagement with the other inhibiting relative axial rotation therebetween.

2. (Original) The master cylinder of claim 1 wherein the first and second sets of protrusions are configured to have a plurality of nested engagement positions as the push rod is axially rotated relative to the housing, the rest position of the lever moving a select amount relative to the housing as the first set of protrusions is rotated relative to the second set of protrusions between adjacent nested engagement positions.

- 3. (Original) The master cylinder of claim 1 further comprising means operatively associated with the push rod for preventing movement of the piston relative to the cylinder as the rotating force is applied to the push rod.
- 4. (Original) The master cylinder of claim 1 wherein the first and second sets of protrusions extend radially.
- 5. (Original) The master cylinder of claim 4 further comprising a piston coupling enveloping a second end of the push rod and attached thereto to rotate with the push rod, the first set of protrusions being attached to an outer surface of the piston coupling.
- 6. (Original) The master cylinder of claim 5 further comprising an externally threaded insert threadably engaged with the caliper housing having an inner bore, the second set of protrusions extending radially inward from a surface of the inner bore and the piston coupling being received in the inner bore.
- 7. (Original) The master cylinder of claim 6 wherein the externally threaded insert further includes radially inclined gear teeth engaged with a worm, the worm preventing axial rotation of the threaded insert upon application of the rotation force to the push rod.
- 8. (Original) The master cylinder of claim 1 wherein the first and second sets of protrusions extend axially.
- 9. (Original) A master cylinder for a hydraulic disc brake comprising: a housing defining a cylinder, the cylinder having a first and second end along its axis; a piston received in the cylinder, the piston having a radial seal between the piston and cylinder;

a lever pivotably associated with the housing for pivoting between a rest position and an actuated position relative to the housing;

a push rod operatively associated with the piston and the lever to move the piston axially within the cylinder as the lever is actuated between the rest and actuated position;

a threaded engagement between a first end of the push rod and the lever, the threaded engagement being configured to cause movement of the rest position of the lever relative to the housing when a rotating force is applied to the push rod causing axial rotation of the push rod; and

indexing means operatively associated with the push rod for providing indexed axial rotation of the push rod upon application of the rotating force to the push rod causing axial rotation of the push rod.

- 10. (Original) The master cylinder of claim 9 wherein the indexing means prevents rotation of the push rod unless the rotating force applied to the push rod is greater than a select amount.
- 11. (Original) The master cylinder of claim 9 wherein the indexing means comprises a first set of protrusions operatively associated with the push rod and a second set of protrusions fixed against rotation relative to the push rod, the first and second protrusions being configured to have a plurality of nested engagement positions as the push rod is axially rotated relative to the housing, the nest position lever moving a select amount relative to the housing as the first set of protrusions is rotated relative to the second set of protrusions between adjacent nested positions.
- 12. (Original) The master cylinder of claim 9 further comprising means operatively associated with the push rod for preventing movement of the piston relative to the cylinder as the rotating force is applied to the push rod.
- 13. (Previously presented) A master cylinder for a bicycle hydraulic disc brake, the master cylinder comprising:
 - a housing defining a cylinder, the cylinder having a first and second end;
 - a hydraulic reservoir;
- a port between the hydraulic fluid reservoir and the cylinder providing fluid communication between the hydraulic fluid reservoir and the cylinder, the port having a port opening located between the first and second ends of the cylinder;

a piston received in the cylinder having a radial seal, the piston being movable between a select starting position with the seal between the first end and the port opening with the seal a select distance from the port opening and a pressurized position with the seal between the port opening and the second end, the radial seal preventing fluid flow between the cylinder and the reservoir when positioned between the port opening and the second end to pressurize the second end;

a lever pivotably attached to the houising, the lever being operatively associated with the piston to move the piston between the select starting position and the pressurized position as the lever is pivoted between a rest position and a fully actuated position;

dead band adjustment means operatively associated with the piston for moving the radial seal to adjust the select distance between the port opening and the seal; and

compensating means operatively associated with the dead band adjustment means and the lever to maintain the lever in a select rest position as the dead band adjustment means is actuated to adjust the select distance between the port opening and the seal.

- 14. (Previously presented) The master cylinder of claim 13 further comprising a push rod having a second end operatively associated with the piston and a first end operatively associated with the lever to translate pivotal movement of the lever to axial movement of the piston within the cylinder, the dead band adjustment means comprising a threaded member threadably engaging the housing axially of the first end of the cylinder, the threaded member having an axial bore receiving the push rod, the push rod and threaded member being configured so that axial rotation of the threaded member in a first direction moves the push rod toward the second end of the cylinder and axial rotation of the threaded member in a second direction moves the push rod away form the second end of the cylinder.
- 15. (Previously presented) The master cylinder of claim 13 further comprising reach adjustment means operatively associated with the lever for varying the rest position to adjust the reach of the lever independent of movement of the select distance between the port opening and the seal.

- 16. (Previously presented) The master cylinder of claim 15 wherein the reach adjustment means comprises a push rod and a cross dowel, the push rod having a second end operatively associated with the piston and an axially threaded first end, the cross dowel being received in the lever for pivoting about a cross dowel axis transverse the axis of the cylinder, the cross dowel having an internally threaded bore transverse the cross dowel axis, the internally threaded bore threadably receiving the axially threaded first end of the push rod, whereby axial rotation of the push rod moves the cross dowel axially of the push rod to pivot the lever about its pivot to move its rest position to adjust the reach.
- 17. (Previously presented) The master cylinder of claim 14 wherein the first end of the push rod is axially threaded and the compensating means comprises a threaded connection between the first end of the push rod and the lever, the threaded connection being configured to maintain the lever in a select rest position relative to the housing as the threaded member and thereby the push rod are rotated in either of the first and second directions to vary the select starting position of the piston.
- 18. (Previously presented) The master cylinder of claim 16 wherein an axis of the internally threaded bore of the cross dowel does not intersect the cross dowel axis.
- 19. (Previously presented) A master cylinder for a bicycle hydraulic disc brake, the master cylinder comprising:

a housing defining a cylinder, the cylinder having a first and a second end along its axis; a hydraulic fluid reservoir with a port between the hydraulic fluid reservoir and the cylinder, the port having an opening between the first and second cylinder ends;

a piston having a seal between the cylinder and the piston, the seal having a leading seal edge, the leading seal edge being movable relative to the port opening to vary a dead band distance between the leading seal edge and the port opening with the piston in an unactuated position;

a one piece lever pivotably associated with the housing and operatively associated with the piston for moving the piston within the cylinder between an unactuated and an actuated position as the lever is actuated between a rest position and an actuated position; a reach adjustment operatively associated with the lever for varying the rest position of the lever relative to the master cylinder housing independent of movement of the leading seal edge relative to the hole as the reach adjustment varies the rest position of the lever.

20. (Currently Amended) A method of varying a reach of a lever actuated bicycle hydraulic disc brake master cylinder, the disc brake master cylinder having a housing defining a cylinder and a port, a piston received in the cylinder, the piston having a seal between the piston and the cylinder wherein the distance between a leading edge of the seal and the port defines a dead band, the lever being one piece and being operatively associated with the piston, the dead band being variable independent of lever movement, the method comprising:

varying the reach of the one-piece lever; and maintaining a select dead band as the reach of the one-piece lever is varied.

- 21. (Previously presented) A master cylinder for a bicycle hydraulic disc brake, the master cylinder comprising:
 - a housing defining a cylinder, the cylinder having a first and second end;
 - a hydraulic fluid reservoir;
- a port between the hydraulic fluid reservoir and the cylinder providing fluid communication between the hydraulic fluid reservoir and the cylinder, the port having a port opening located between the first and second ends of the cylinder;

a piston received in the cylinder having a seal operatively associated therewith, the seal having a leading edge, the leading seal edge being moveable between a select starting position with the leading seal edge between the first end and the port opening with the leading seal edge a select distance from the port opening and a pressurized position with the leading seal edge between the port opening and the second end, the leading seal edge preventing fluid flow between the cylinder and the reservoir when positioned between the port opening and the second end to pressurize the second end;

a one piece lever pivotably attached to the housing, the lever being associated with the piston to move the piston between the select starting position and the pressurized position as the lever is pivoted between the rest position and a fully actuated position;

reach adjustment means operatively associated with the lever for varying the rest position of the lever with respect to the housing independently of movement of the select distance between the port opening and the leading seal edge; and

dead band adjustment means operatively associated with the piston for moving the leading seal edge to adjust the select distance between the port opening and the leading seal edge without varying the rest position of the lever.

REMARKS

Claims 1-18 are allowed. Claim 20 stands rejected under 35 USC § 101 as claiming the same invention as that of claim 17 of U.S. Patent No. 6,804,961. Claim 19 stands rejected under obviousness-type double patenting as being unpatentable over claim 16 of U.S. Patent No. 6,804,961. Claim-21 stands rejected under obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,804,961. Claims 19-21 remain at issue.

Claim 20 has been amended to recite in the body of the claim varying the reach of the one-piece lever; and maintaining a select dead band as the reach of the one-piece lever is varied. Claim 20, as amended, is clearly of a slightly different scope than claim 1 of U.S. Patent No. 6,804,961, because claim 20 recites a one-piece lever while claim 1 of the '961 patent has no limitation regarding whether the lever is of one or multiple pieces. Accordingly, the claims are no longer coextensive in scope.

Submitted herewith is a terminal disclaimer in compliance with 37 CFR 1.321(c) of the present application disclaiming any term beyond that of commonly owned U.S. Patent No. 6,804,961. Applicant respectfully submits this terminal disclaimer puts each of claims 19-21, which are not coextensive in scope with claims 16, 17 and 1 of the '961 patent, in condition for allowance.

Applicant respectfully submits the claims as amended are allowable over the art of record and reconsideration and issuance of a notice of allowance are respectfully requested. If it would be helpful to obtain favorable consideration of this case, the Examiner is encouraged to call and discuss this case with the undersigned.

This constitutes a request for any needed extension of time and an authorization to charge all fees therefore to deposit account No. 19-5117 if not otherwise specifically requested. The undersigned hereby authorizes the charge of any required fees not included or any deficiency of fees submitted herewith to be charged to deposit account No. 19-5117.

Respectfully submitted,

Thomas D. Bratschun, #32,966 Swanson & Bratschun, L.L.C.

1745 Shea Center Drive, Suite 330

Highlands Ranch, Colorado 80129

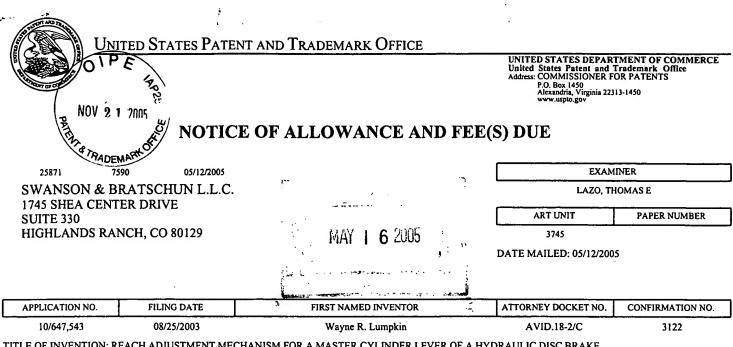
(303) 268-0066

cc: Milan Milosevic

Lisa Wunderlich

Wayne Lumpkin

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TITLE OF INVENTION: REACH ADJUSTMENT MECHANISM FOR A MASTER CYLINDER LEVER OF A HYDRAULIC DISC BRAKE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$0	\$0	\$0	08/12/2005

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE REFLECTS A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE APPLIED IN THIS APPLICATION. THE PTOL-85B (OR AN EQUIVALENT) MUST BE RETURNED WITHIN THIS PERIOD EVEN IF NO FEE IS DUE OR THE APPLICATION WILL BE REGARDED AS ABANDONED.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown

B. If the status above is to be removed, check box 5b on Part B -Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL should be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). Even if the fee(s) have already been paid, Part B - Fee(s) Transmittal should be completed and returned. If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

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	Application No.	Applicant(s)				
Notice of Allowability ADEMARK	10/647,543 Examiner	LUMPKIN, WAYNE R.				
NOUCE OF AHOWADINEY	Examiner	Account				
	Thomas E. Lazo	3745				
The MAILING DATE of this communication appeal claims being allowable, PROSECUTION ON THE MERITS IS (herewith (or previously mailed), a Notice of Allowance (PTOL-85) NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT Right of the Office or upon petition by the applicant. See 37 CFR 1.313	OR REMAINS) CLOSED in this apport of the communication of the communication of the communication is subject to the communication is subject to the communication is subject to the communication in the communication is subject to the communication of the communication is subject to the communication of the communication is subject to the communication of the communi	plication. If not included now will be mailed in due course. THIS				
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2. X The allowed claim(s) is/are <u>1-21</u> .						
3. A The drawings filed on 25 August 2003 are accepted by the	Examiner.					
 4.						
Attachment(s) 1. Notice of References Cited (PTO-892) 2. Notice of Draftperson's Patent Drawing Review (PTO-948) 3. Information Disclosure Statements (PTO-1449 or PTO/SB/Paper No./Mail Date 4. Examiner's Comment Regarding Requirement for Deposit of Biological Material	6. ☐ Interview Summar Paper No./Mail D 08), 7. ☐ Examiner's Amen	ate				